

A NEW SPECIES OF *EPILOBIUM* (ONAGRACEAE) IN CALIFORNIA

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ABSTRACT

Epilobium howellii, a new species from California, is described, and compared with similar species in the region. An uncommon plant marked by glandular hairs all over its stems, it is restricted to wet, possibly boggy, areas of the Sierra Nevada Mountains.

KEY WORDS: Onagraceae, *Epilobium*, California

A specimen of *Epilobium* collected in 1975 at Yuba Pass in the northern Sierra Nevada Mountains of California, and recollected in 1981 to obtain seeds for experimental cultivation, proved to be, surprisingly, an undescribed species. A search through hundreds of personal collections and thousands of herbarium specimens on loan for ongoing monographic work on North American *Epilobium* turned up a few additional specimens from elsewhere in the Sierra Nevada, which helped to establish the distinctness of the new taxon. A thorough search of the literature established that it has not been described before. Because the morphological distinctions among many species of *Epilobium* are fine, clear taxonomic keys are few, and the genus has a reputation (sometimes overstated) for hybridization, a conservative taxonomic approach to the delimitation of species in the genus (Trelease 1891; Raven & Raven 1976) is clearly warranted. Nevertheless, observations of the plant in the field, the herbarium, and the greenhouse support recognition of the following new species of *Epilobium*, which would be placed into section *Epilobium*:

Epilobium howellii Hoch, *sp. nov.* TYPE: U.S.A. California: Sierra Co., Yuba Pass summit, along CA Highway 49; 39° 39' N, 120° 30' W; scattered population among grasses and moss in semi-open *Salix* swales; elev. 2,040 m; 27 Jul 1975, Hoch 665 (HOLOTYPE: MO).

Herba perennis tenuis, brevibus filiformibus foliosisibus stolonibus; caulis undique glandulosus; folia sessilia, 4-20 mm longa, rotundata vel lanceolata; petala alba, 2-3 mm; stigma capitatum; capsulae 35-45 mm longae, subglabrae, pedicelli 25-40 mm; semina 0.8-1.1 mm longa, vix papillosa.

Delicate perennial herb, forming short threadlike stolons with scattered minute leaves. Stems 8-20 cm tall, densely glandular, terete, loosely clumped. Leaves sessile, the blades 4-20 mm long, round to lanceolate or narrower above, tip obtuse to subacute above, margins finely denticulate, stigillose mainly on veins or all over on upper leaves. Inflorescence erect. Flowers small, subcleistogamous; floral tube 0.4-0.8 mm deep; sepals 1.5-2.0 mm long; petals 2-3 mm long, white; stamens in two unequal sets, the longer ones shedding pollen onto capitate stigma prior to petal expansion. Capsules 35-45 mm long, subglabrous, on pedicels 25-40 mm long. Seeds 0.8-1.1 mm long, the surface low papillate; coma dingy, easily detached. $2n = 36$.

Distribution: Scattered locations in the high Sierra Nevada Mountains of California, in Fresno, Mono, and Sierra counties; in mossy meadows and swales, at 2000-2700 m elevation.

Phenology: Flowering period: July-early August; fruiting period: August-October.

Representative specimens examined: U.S.A. California: Fresno Co.: 3 mi. E of Huntington Lake, Hoch 486 (MO, RSA); 1 mi. SW of Portal Forebay, Hoch 509 (MO). Mono Co.: Twin Lakes, south shore, Hoch 593 (MO). Sierra Co.: Yuba Pass summit, Wagner 4550 (MO).

Chromosome count: $n = 18$, count provided by Warren L. Wagner, from plants cultivated at Missouri Botanical Garden, Hoch M2616 (MO), from seed source: Wagner 4550.

With great respect, I name this plant after John Thomas Howell, enthusiastic collector of Californian epilobiums and observant student of the Sierran flora, in honor of his 90th birthday. This species is described now in order to make the name available for the treatment of *Epilobium* in *The Jepson Manual: Higher Plants of California*.

Epilobium howellii has a similar small, delicate stature, with spreading threadlike stolons, to that of *E. oregonense* Hausskn., but differs from it and most other North American species of *Epilobium* (Hoch 1993; Munz 1965) in having stems covered with glandular pubescence. The flowers are strikingly and consistently small (petals not more than 3 mm long), possibly cleistogamous, and the leaves never more narrow in shape than lanceolate. This combination of features, especially the unusual pattern of pubescence, distinguishes this species also from the so called Alpinae group (Haussknecht 1884), which are of similar habit and stature.

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